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ABSTRACT

The CIRCUS Assessment battery has been demonstrated to be very effective when used by teachers in conventional preschool programs, with typical students. This discussion investigates the feasibility of using CIRCUS with educationally handicapped children: (1) for the early identification of educable mentally retarded (EMR) or learning disabled (LD) children; and (2) to aid teachers in designing educational programs for these children. Various CIRCUS measures which might prove useful in identifying the expected performance of EMR and LD children are discussed, and the characteristics of CIRCUS which make it adaptable to instructional planning--including narrative sentence reports, competency ratings of children's performance, and a handbook of instructional activites--are described. A primary advantage in using CIRCUS for screening is its appropriateness for school or system-wide use. The major reason for using CIRCUS in instructional planning is that the necessary support materials have already been developed and are readily available. Although special educators who have worked with the CIRCUS battery are generally positive about its usefulness, more data are required for an adequate evaluation of its potential uses. (Author/MV)

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Assessment of Competencies of EMR and LD Children for Screening and Instructional Planning

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The CIRCUS battery has been demonstrated to be very effective when used by teachers in conventional educational programs (Anderson, et al., in press). The evidence to date has been directed toward the use of CIRCUS with "typical students." Now, however, questions have been raised about the feasibility of using CIRCUS with educationally handicapped children. One question focuses on whether CIRCUS can be used in screening or early identification of children who are educable mentally retarded (EMR) or who are learning disabled (LD). A second question concerns whether CIRCUS measures can be used effectively by teachers in designing educational programs for these children.

Screening programs devised to identify educationally handicapped children often consist of two major stages; the question of whether CIRCUS can be used for screening handicapped children has been raised in connection with the first of these stages. Rather massive in scope, Stage I is an initial, preliminary identification of children with possible educational handicaps. Specific children thus identified are then referred to one or more experts or agencies for further evaluation; i.e., Stage II screening. Frequently this Stage II screening involves a number of specialists (e.g., pediatricians, psychiatrists, speech pathologists) and a multiplicity of "complex and sophisticated" assessment procedures. Stage II screening is designed to confirm suspicions regarding whether the child is handicapped, to identify the specific handicap(s), to diagnose the cause of the handicapping condition, and possibly to recommend enrollment in some type of special program.

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Although considerable debate exists about the merits of early screening of young children, both proponents and critics express concern about the manageability of massive screening efforts. Frequently the view is expressed that decent "developmental" screening is too complicated, too time-consuming, and too costly to do on a mass basis. In addition, reviewers of existing screening tests are quite outspoken in identifying defects in the construction, validation, and norming of such tests.

It is not unreasonable to expect that a technically sound and comprehensive assessment battery like CIRCUS might be used school- or system-wide for children in preschool educational programs. If CIRCUS can be used to identify children with high probability of educational handicaps, then massive Stage I screening of in-school children may be a more reasonable possibility.

The second question regarding the use of CIRCUS with handicapped children involves its value as an aid in instructional planning. Mainstreaming, the integration of special children into regular classroom settings and processes, is an objective often voiced by specialists concerned with early education of the handicapped. These specialists are, however, quite concerned about the possibility of their "graduates" losing all they have gained. There is also considerable concern whether "regular" classroom teachers, having no previous special education training, will be able to provide instructional activities that will contribute to the continued development of handicapped children.

Discussions with special educators suggest that CIRCUS may be promising insofar as providing a vehicle for training and supporting regular classroom teachers in their efforts to design instructional activities for handicapped children. Special educators seem especially interested in the CIRCUS narrative sentence reports, which might be used to identify areas of needed work. In

addition, a group of teachers experienced in the use of CIRCUS, have contributed to a handbook of suggested follow-up instructional activities (Educational Testing Service, in press) that special educators could build on and tie closely to children's actual performance on the tests.

In order to get some preliminary idea about whether an investigation of these possible uses of CIRCUS would be worth pursuing, we sought help from a small group of educators who work with EMR and LD children. These educators critically reviewed the CIRCUS measures and materials, administered the tests to a sample of EMR and LD children, and reported their conclusions. The purpose here is to summarize their ideas regarding the use of CIRCUS to assess the competencies of EMR and LD children. Additionally, some attention will be given to identifying and describing aspects of CIRCUS that have generated the most interest on the part of special educators.

CIRCUS Measures

Nine of the measures in the present CIRCUS array were pinpointed as likely to provide useful information about the competencies of LD and EMR children--whether used in the context of screening or of instructional planning. Those nine measures, plus one measure suggested for screening use only, are indicated in Table 1.

CIRCUS 1, 8, 9, and 10 are language measures. With the exception of CIRCUS 1, What Words Mean, the language measures were considered useful for those who work with LD children. What Words Mean was, however, favorably received as a useful test for EMR children. CIRCUS 1 assesses the child's comprehension of a sample of "content" words: nouns, verbs, and modifiers.

CIRCUS 8, How Words Work, is a measure of the child's ability to understand verb forms; statements involving prepositions, negation, or conjunctions;

and sentences with different structures. EMR teachers suggest that, except for items involving verb forms, this test is probably useful with EMR students.

CIRCUS 1 provides a measure of receptive vocabulary and CIRCUS 8 a measure of receptive functional language. CIRCUS 9, Listen to the Story, provides an additional measure of receptive language that both EMR and LD teachers suggest as useful. CIRCUS 9 is a measure of the child's ability to listen to a narrative, understand the story, and interpret events in it.

CIRCUS 10, Say and Tell, is a productive language measure, and provides a reasonable sample of the child's spoken language in three areas: I. Description, II. Functional Language, and III. Narration. Part 1 assesses both the

TABLE 1

CIRCUS Measure Identified as Probably Useful in Working With EMR and LD Children

CIRCUS Measure	Group: EMR	Group: LD
1. What Words Mean (Receptive Vocabulary)	X	
2. How Much & How Many (Quantitative Concepts)	(maybe parts)	X
3. Look-alikes (Visual Discrimination)	X	X
4. Copy What You See (Perceptual-Motor Coordination)	X	
8. How Words Work (Receptive Functional Language)	(some parts)	X
9. Listen to the Story (Comprehension, Interpretation, and Recall of Oral Language)	X	X
10. Say & Tell (Productive Language)	X	X
12. See & Remember (Visual & Associative Memory)		X
13. Think it Through (Problem Solving)	(maybe parts)	X
14. Make a Tree (Divergent Pictorial Production)	(special use)	

child's competency in (a) responding to direct questions, and (b) describing an object in a free response situation. Part II measures the child's ability to use the appropriate forms of functional words. plurals; verbs; prepositions, subject-verb agreement, possessives; and comparisons. In Part III, Narration, the child is shown a large colored picture of a busy circus ring and is asked to make up a story to go with the picture. A child's ability in narration is indicated by total number of words, number of different words, and quality. The qualitative dimension covers the child's inclusion of such elements as verbs, modifiers, proper syntax, sequence, rhythm, and descriptions of characters or events that cannot be directly inferred from the drawing. One LD teacher indicated that CIRCUS 10, Listen to the Story, would be the test she would choose if she could use only one test out of the CIRCUS battery.

CIRCUS 2, How Much and How Many, provides a measure of quantitative concepts in three areas: counting, relational terms, and numerical concepts. Performance in the area of relational terms was suggested as especially important in working with LD children. In addition, the special education teachers pointed out that "visual search or scanning" is required in order to answer the items in CIRCUS 2--this requirement increases the usefulness of the test for providing needed information about many LD children.

Visual search is also required for answering items in CIRCUS 3, Look-alikes, according to our LD teachers. Each item in CIRCUS 3 presents a stimulus drawing and three response drawings from which the child selects the one that "looks just like" the stimulus. The separate subscore provided for reversals was considered an important "plus" for using CIRCUS 3 with both EMR and LD children.

The CIRCUS battery includes one measure of perceptual-motor coordination: CIRCUS 4, Copy What You See. CIRCUS 4 was identified as probably useful with

EMR children but was considered of limited use in working with LD children. CIRCUS 4 measures the child's ability to copy standard abstract forms that are presented visually. The task does not require ability to recognize or name letters and numbers. One special education teacher suggested that the order in which items in CIRCUS 4 were copied should be left to the student--but the order should then be recorded. It was also suggested that, for this test to be useful in working with LD children, there should be more items involving angles, especially acute angles.

Two additional CIRCUS measures were identified as among the nine likely to be useful in both screening and instructional planning: CIRCUS 12, See and Remember, and CIRCUS 13, Think it Through. CIRCUS 12 assesses the child's ability to remember both immediately and after intervening experiences, but without relying on oral response. The measure is considered a good candidate for use with LD children, but reportedly "may be beyond the manageability of EMR students." CIRCUS 13 measures some of the elements involved in problem solving. The present administration procedures do not include recording the time it takes to respond to each of the questions in this test, however, our special education teachers suggest that this may provide very important information.

A tenth measure, CIRCUS 4, Make a Tree, was suggested as potentially useful in differentiating EMR and LD children from each other and from non-EMR and -LD children; the suggested use was specifically that of screening. CIRCUS 14 is a construction task in which children are asked to make a tree with colored gummed stickers of various shapes. After a brief interval (not more than a week) the children are asked to make another tree "just as different from the first one as you can." A difference score describes the degree to which the

child's two trees resemble each other. It is expected that the two trees will be almost identical for EMR children. On the other hand, LD children would probably produce trees that are quite different.

Score Profiles

If the CIRCUS battery does provide an appropriate coverage of the abilities and skills that usefully describe EMR and LD children, score profiles should be especially informative for discriminating among EMR, LD and non-EMR and -LD children. Profiles of scores enable us to identify obvious strengths and weaknesses and discrepancies in competence in different subject areas for individual children. Intra-individual variation in performance on CIRCUS measures, however, may be less apparent for EMR children than for non-EMR children. On the other hand, intra-individual variation for LD children should not only be apparent but may well be characterized as "extreme." Although profiles for different LD children may appear quite dissimilar, such profiles are likely to share a common characteristic: large discrepancies in performance across measures in the profile. These discrepancies are expected to be much greater for LD children than for either EMR or "normal" children. Thus, the degree of intra-individual variation has been suggested as a variable of major importance in discriminating LD children from non-LD children.

Our special education colleagues provided some preliminary indications of the patterns of performance that could be expected with EMR and LD children who are administered the tests in the CIRCUS battery. For example, many LD children have average to high IQ scores, and they score high on receptive language and comprehension measures, but have trouble with "visual scanning or searching tasks," and they score relatively poorly on language production measures. These children could be expected to perform well on CIRCUS 13

(problem solving), CIRCUS 8 (receptive language), and CIRCUS 9 (comprehension). Because of the "visual search" requirements in answering items in CIRCUS 2 and CIRCUS 3, such children might not perform too well on these two measures. LD children with language production problems would also probably do quite poorly on CIRCUS 10.

CIRCUS: An Instructional Planning System

The first part of this paper has been a report of the comments and suggestions made by several educators who work with EMR and LD children. The focus has been on identifying the CIRCUS measures which are or are not likely to be useful and, to some extent, indicating the expected performance of EMR and LD children, if indeed CIRCUS is appropriate for use with these types of children. The present section is intended to introduce the reader to the aspects of CIRCUS that have been primarily responsible for special educators' interest in using CIRCUS for instructional planning. Narrative sentence reports, competency ratings of children's performance, and a handbook of instructional activities are the aspects of CIRCUS that make it an Instructional Planning System and offer promise for training and supporting the regular classroom teachers confronted with "mainstreaming."

Sentence Reports

Score profiles are useful in identifying relative strengths and weaknesses within the area measured by a specific CIRCUS test, and instructional needs for particular children can be identified by inspection of profiles of subscores. The CIRCUS sentence reports, however, are considered even more valuable in using CIRCUS for planning instructional programs.

The sentence reports are verbal descriptions of a child's performance on a particular CIRCUS measure and utilize information about the total performance

on the test plus information about performance on important subsets of the items. For example, CIRCUS 9, Listen to the Story, results in a total score and separate subscores for comprehension and for interpretation. Sentence reports for CIRCUS 9 describe the child's competency in listening comprehension skills, and identify children who may need additional help with simple comprehension or interpretation. Table 2 presents sentence reports corresponding to selected scores on CIRCUS 9.

Competency Ratings and Instructional Grouping

The sentence reports help pinpoint areas where further instruction is needed for individual children. Each sentence report includes a competency

TABLE 2

Sentence Reports Corresponding to Selected Scores on CIRCUS 9, Listen to the Story

Kindergarten			Report
Total Score (max=25)	Comprehension (max=15)	Interpretation (max=10)	
16-23	0-11	7-10	Generally competent in listening to a story and understanding it, but did not respond correctly to many items requiring simple comprehension of what was said.
6-15	12-15	0- 6	Probably needs further instruction in listening comprehension skills. Did not respond correctly to many items requiring interpretive responses.
0- 5			CIRCUS 9 may not have provided appropriate measurement of child's listening comprehension skills. Retesting and examination for possible hearing defects may be indicated.

Note: From CIRCUS Administering, Scoring, and Interpreting the Instruments (Preliminary Edition), 1974, Educational Testing Service. (p. 98)

rating of the child's performance for the test as a whole, and for separate subscore areas within the test (e.g., underlined portions of the reports shown in Table 2). In addition, the CIRCUS manual includes a separate table for each measure which shows the rating corresponding to each possible total and sub-area score. Each child's ratings obtained by such tables can then be recorded on a Class Analysis Sheet and used for identifying instructional groups.

Table 3 is a portion of a completed Class Analysis Chart. The column headings in Table 3 indicate the possible competency ratings for CIRCUS 9 scores and

TABLE 3

CLASS ANALYSIS

CIRCUS Test 9: Listen to the Story

	SUMMARY RATINGS				COMPREHENSION		INTERPRETATION	
	RETESTING AND EXAMINATION INDICATED	COMPETENCE APPEARS SOMEWHAT LIMITED	GENERALLY COMPETENT	VERY COMPETENT	PROBABLY NEEDS FURTHER INSTRUCTION	COMPETENT	PROBABLY NEEDS FURTHER INSTRUCTION	COMPETENT
Arnold			✓		✓		✓	
Bobby			✓		✓			✓
Chris				✓		✓		✓
Darlene		✓			✓			✓
Edna		✓			✓		✓	
Frieda			✓			✓	✓	
George		✓			✓		✓	
Harvey		✓			✓		✓	
↓	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
Zelda		✓				✓	✓	
Totals Per Rating		9	14	2	15	10	12	13

subscores, and a check mark has been entered to show the ratings for each child. The Totals Per Rating identify the number of children with common instructional needs. This chart also identifies the individual children who will be grouped together for instruction.

Instructional Activities

Earlier in this paper, I mentioned that a number of teachers who have used CIRCUS contributed to a handbook of suggested follow-up instructional activities. This handbook is in the final stages of preparation and is called After the CIRCUS (Educational Testing Service, in press). By using performance on CIRCUS measures as instructional diagnostic information, and by building on the ideas included in the handbook, special educators may be able to design programs and materials for training and supporting the regular classroom teachers who are to provide instructional activities for handicapped children.

Closing Comments

A primary advantage in using CIRCUS for screening is that it is appropriate for school- or system-wide use. The major advantage in using CIRCUS for instructional planning is that needed support materials have already been developed and are readily available for immediate use. The sentence reports and competency ratings have already been developed and are easily used for class analysis and instructional grouping. In addition, the After the CIRCUS materials provide suggested instructional activities that have already been tried out by classroom teachers. These advantages, however, become relevant considerations only if the measures have met other criteria of usefulness.

The special educators who have assisted us are generally positive regarding the usefulness of the CIRCUS battery. A good deal more teacher reaction/suggestion data and student response data are required for an adequate evaluation.

Let me close this presentation, therefore, by mentioning some of the areas where further investigation is needed.

Certainly, if CIRCUS is to be used for screening and/or instructional planning, the battery must provide an appropriate coverage of the abilities and skills that usefully describe EMR and LD children. Most of the concern to date has been on whether the measures now in the battery would provide useful information. We need more information about any critical areas that either are not assessed at all or are not adequately assessed by the current CIRCUS battery.

How sensitive the CIRCUS measures are with respect to differences in the competencies among different children and to differences in competence across different subject areas can be evaluated only if considerably more student response data are collected. Sensitivity to inter-individual and group differences is necessary for CIRCUS to be useful in screening. Additionally, sensitivity to intra-individual differences is of major concern if CIRCUS is to be used as an instructional planning system for EMR and LD children.

Suggested modifications in test content and administration/scoring procedures require tryout and evaluation. In administering CIRCUS 4, for example, it was suggested that the order in which forms were copied should be left to the student but that the order should be recorded. Recording the time it takes to respond to each of the questions in CIRCUS 13 has also been suggested. Whether these modifications in procedures would produce information that would be useful in identifying or working with handicapped children is a matter for further investigation.

Additional questions arising from our discussions with EMR and LD teachers require consideration. For example, is it feasible to plan for small group

administration of CIRCUS measures, or will it be necessary to administer the tests individually when testing EMR and LD children? Can the CIRCUS items be used as stimuli or as ways of structuring situations for indepth type "interrogation" to confirm or disprove the acquisition of various skills or competencies? Can CIRCUS be used effectively in talking with parents about their children?

Certainly, more information is needed before strong consideration could be given to using CIRCUS with children who are educationally handicapped. Completing the needed studies will require considerably more time and effort, but our preliminary work suggests such activities are worth pursuing.

REFERENCES

Anderson, S. B., Bogatz, G. A., Draper, T. W., Jungeblut, A., Sidwell, G., Ward, W. C., & Yates, A. CIRCUS manual and technical report. Princeton, N.J.: Educational Testing Service, in press.

Educational Testing Service. After the CIRCUS. Princeton, N.J.: Author, in press.